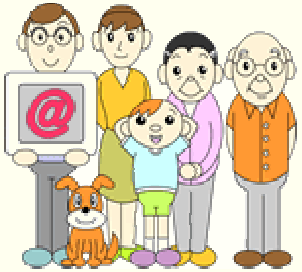
Internet Imaging III

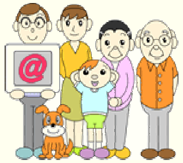


Research and Improving Web Accessibility in JAPAN

21 January 2002

Masaya Ando
Allied Brains, Inc., Tokyo JAPAN

Outline of this presentation



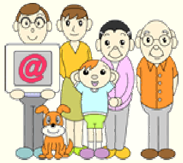
The purpose of this presentation is to report on development of web accessibility evaluation and repairing system to solve unique difficulties in Japan

" *J-WAS* " Project

Japan Web contents Accessibility improving System development Project

1. Background in J-WAS Project
2. Developing web accessibility evaluation and repairing system
3. Plan for J-WAS Project from now

Web Contents Accessibility



Each individual who access to the web has equal access to information that is provided without any barrier caused by physical or mental condition.

（Assurance in information convey）

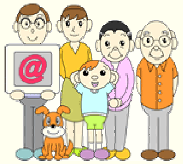
In the US, arise of Rehabilitation Act Section 508 has put this issue under public attention.

Web Contents Accessibility Guideline (WCAG)

- WCAG1.0 was released by World Wide Web Consortium (W3C) ‘s
  Web Accessibility Initiative (WAI)

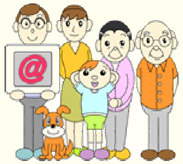
Abstract information on WCAG1.0

- WCAG1.0 explain how to make Web content accessible to people with disabilities.
- The guideline is intended for all Web content developers (page authors and site designers) and for developers of authoring tools.



1. Background in J-WAS Project

Background in J-WAS Project

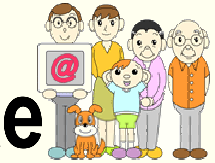


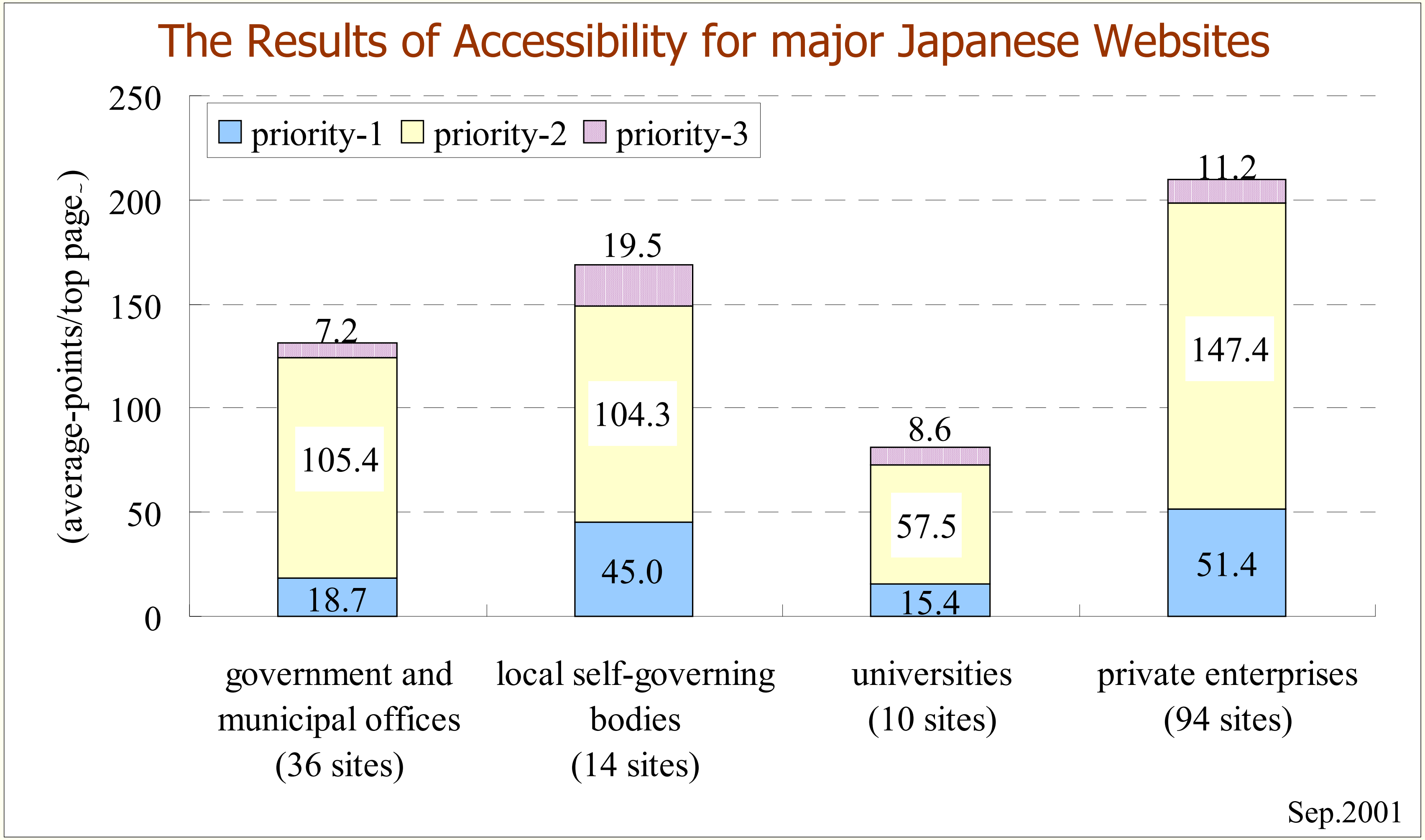
- Almost all Japanese websites including national public sector websites are very poor in accessibility

- Japanese government has been discussing on policies or legislations to improve this situation

- J-WAS project was started under initiative of Soumu-syo Ministry. Because accessibility evaluation tool that is available to Japanese language did not exist.

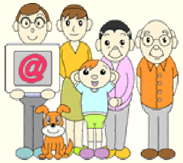
Assuring Accessibility of Japanese Website




The Results of Accessibility for major Japanese Websites
(average-points/top page)
250
200
150
100
50
0
priority-1
priority-2
priority-3
government and municipal offices (36 sites)
18.7
105.4
7.2
local self-governing bodies (14 sites)
45.0
104.3
19.5
universities (10 sites)
15.4
57.5
8.6
private enterprises (94 sites)
51.4
147.4
11.2
Sep.2001

※Count the number of obvious errors on WCAG1.0

History of policies and legislations

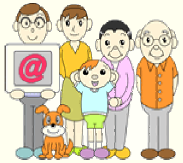


1999 Ministry of Posts and Telecommunications and Ministry of Health and Welfare declared a guideline regarding web contents accessibility (almost the same content as WAI)

2000 November, the government demanded every ministry and national public sector to improve accessibility to its website

2001 March, Government IT Strategy Headquarters included a statement to enhance improvement of information accessibility in “e-japan Priority Policy Program”

History of policies and legislations

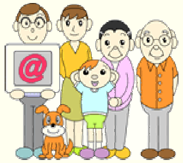


2001~

- Under influence of US Rehabilitation Act section 508, Japanese government is discussing the possibility of enforcing same sort of policy or legislation

- JSA (Japanese Standards Association) is also in discussion in order to set JIS (Japanese Industrial Standards) for web accessibility

About J-WAS Project

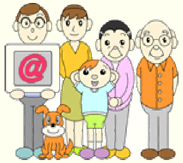


The purposes of this project are…

1. To develop a tool that is available for Japanese websites to evaluate and repaire, and report the test result in Japanese

2. To spread the concept of web accessibility by using evaluation and repairing tool

About J-WAS Project

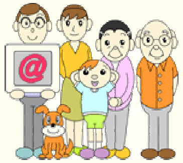


- J-WAS project was started under initiative of Soumu-syo Ministry.

  Soumu-syo ministry:

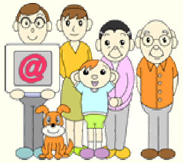
  The Ministry of Public Management, Home Affairs, Posts and Telecommunications

- Allied Brains,Inc., supports this project mainly



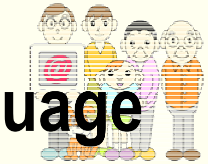
2. Developing web accessibility evaluation and repairing system

System requirements



1. Web-based tool
2. Validates the conformation of WAI guideline (WCAG1.0)
3. Provide easy repairing instruction (or repairing form) to introductory level users who are not familiar with HTML
4. Solve accessibility difficulties that are unique in Japanese language
5. Provide a function that instructs accessibility concept easily
6. Available for contents targeted for Web-phone

Accessibility difficulties that are unique in Japanese language

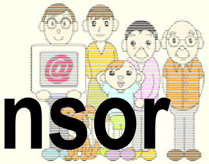


1. It is very hard for speech sensor to pronounce Japanese web page contents correctly

2. It is hard to complete a sentence with characters that are pronouce-able to everyone

3. There are some WCAG criteria that does not apply well to Japanese writing system

Cause of mis-pronounciation by speech sensor

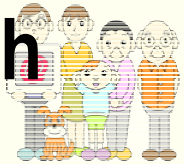


- One KANJI (Chinese character) has multiple ways of pronunciation

  Ex) ”方” can be pronounced “hou” and “kata”,
  both are different meanings

- It is possible to change line even in the amidst of a word
  - Speech sensor does not recognize a word when spacing or changing of line takes place in the amidst of a word

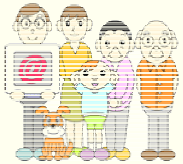
Reason why it is hard to complete a sentence with Kanji that are pronouce-able to everyone



- Japanese language consists of three different kind of characters
  - Kanji(Chinese character), Katakana and Hiragana

- In Japan, KANJI (Chinese character) is ranked in difficulty level
  - There is a standard for Kanji that is used in everyday life basis
  - However, individual Kanji comprehension level varies due to age, generation and education

An example of criterion that does not apply well to Japanese writing system

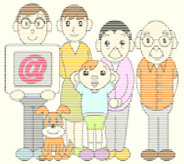


- Adjacent link need to be separated
  [WCAG checkpoint-10.5]

  > Until user agents render adjacent links distinctly, printable characters (surrounded by spaces) between adjacent links. [Priority 3]

  - In Japanese writing system, words are not separated by spacing
  - Speech sensor does not pronounce correctly when space exists in a word

An example of criterion that does not apply well to Japanese writing system

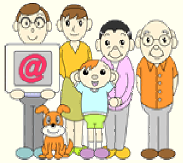


- Link additional information of Non-text elements with “D” [HTML Techniques 7.2]

> When a short text equivalent does not suffice to adequately convey the function or role of an image, provide additional information in a file designated by the "longdesc" attribute. For user agents that don't support "longdesc", provide a description link ([D])

  - “D” stands for “Description,” but it is not clear for Japanese people
  - This needs to be revised in appropriate Japanese expression

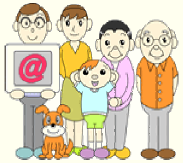
How to realize the system



- Add following items to system in experiment

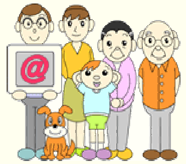
1. Show a warning sign when using non-daily life based Kanji
2. Show a list of replacing words for foreign words that are not easy to understand
3. Make the user check himself/ herself if there is any spacing or changing line
4. Revise part of WAI guideline in regard to Japanese writing system

“Ruby Annotation”

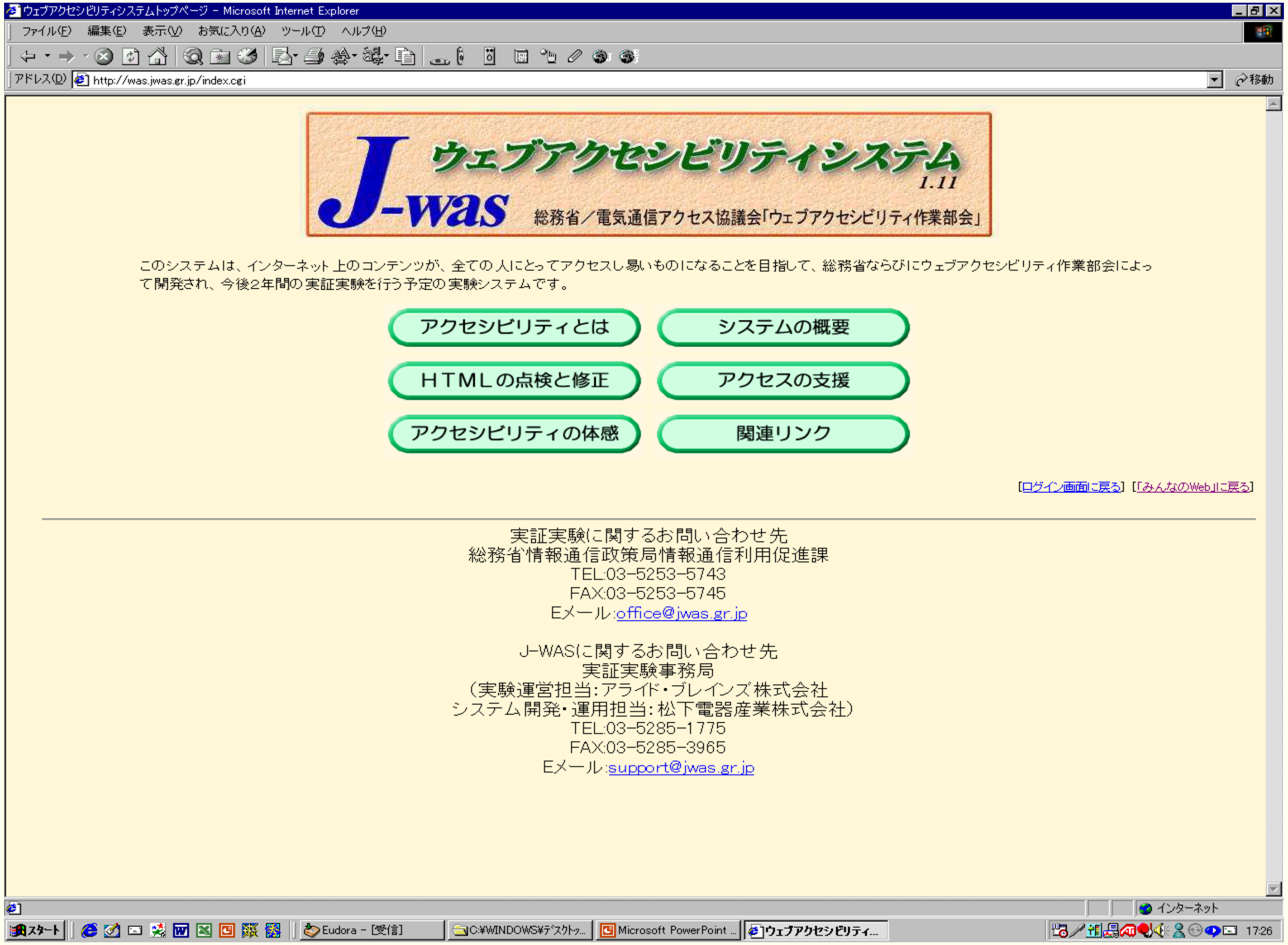


- There is possibility for XHTML “Ruby Annotation” technology to solve difficulties derives from Kanji
  - Ruby Annotation can make anyone read Kanji, which has difficult pronounce
  - However, very few people start to use this technology
  - Need to discuss for the use of Ruby Annotation for Web accessibility

J-WAS URL



- http://www.jwas.gr.jp/ (Japanese Only)

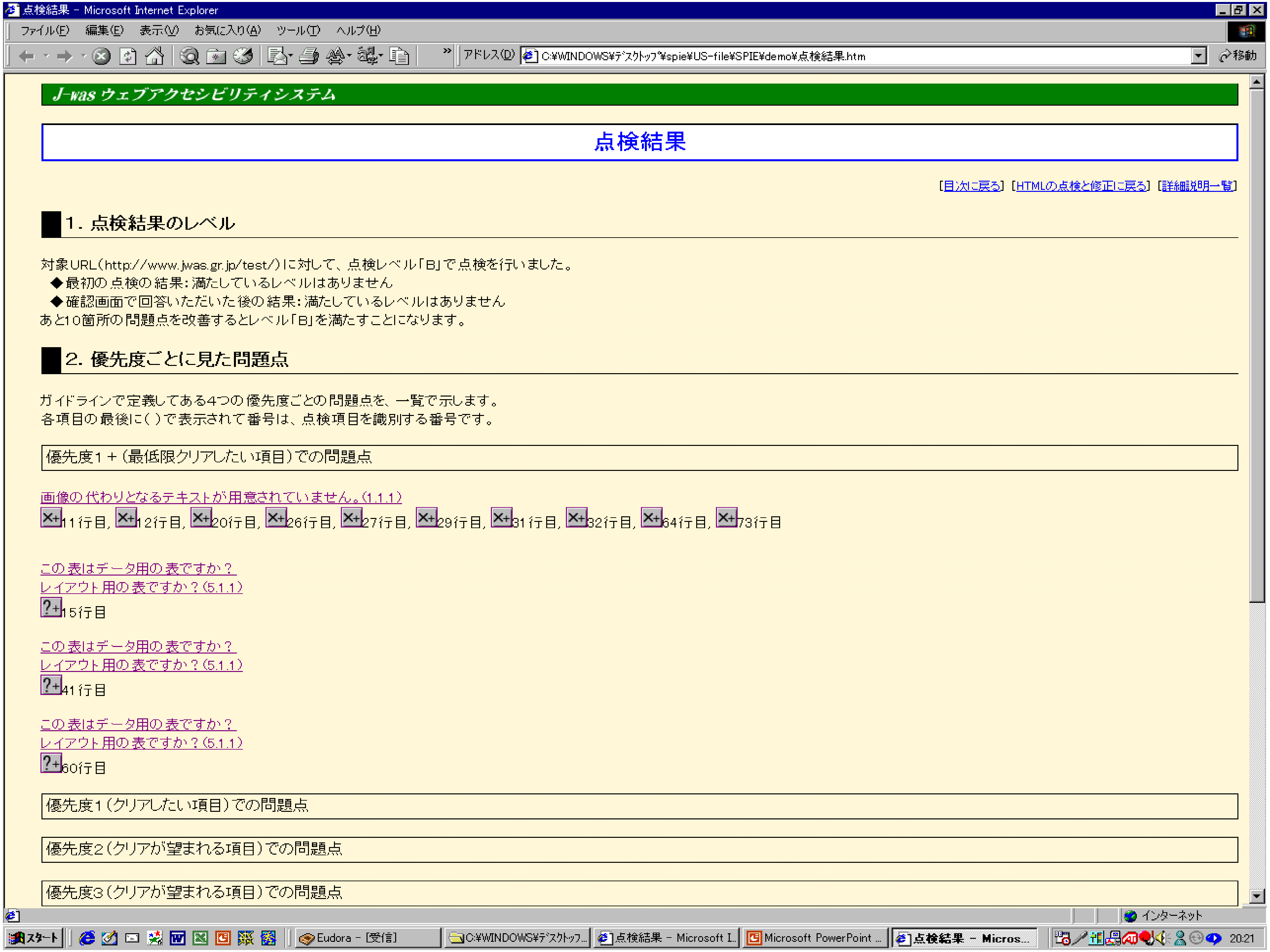


ウェブアクセシビリティシステムトップページ - Microsoft Internet Explorer
ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)
アドレス(D) http://was.jwas.gr.jp/index.cgi
移動
J-was
ウェブアクセシビリティシステム
1.11
総務省／電気通信アクセス協議会「ウェブアクセシビリティ作業部会」
アクセシビリティとは
システムの概要
ＨＴＭＬの点検と修正
アクセスの支援
アクセシビリティの体感
関連リンク
[ログイン画面に戻る] [「みんなのWeb」に戻る]
インターネット
スタート
Eudora - [受信]
C:¥WINDOWS¥ﾃﾞｽｸﾄｯ...
Microsoft PowerPoint ...
ウェブアクセシビリティ...
17:26

このシステムは、インターネット上のコンテンツが、全ての人にとってアクセスし易いものになることを目指して、総務省ならびにウェブアクセシビリティ作業部会によって開発され、今後2年間の実証実験を行う予定の実験システムです。

実証実験に関するお問い合わせ先
総務省情報通信政策局情報通信利用促進課
TEL:03-5253-5743
FAX:03-5253-5745
Eメール:office@jwas.gr.jp

J-WASに関するお問い合わせ先
実証実験事務局
（実験運営担当：アライド・ブレインズ株式会社
システム開発・運用担当：松下電器産業株式会社）
TEL:03-5285-1775
FAX:03-5285-3965
Eメール:support@jwas.gr.jp



点検結果 - Microsoft Internet Explorer
ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)
アドレス(D)
C:¥WINDOWS¥ﾃﾞｽｸﾄｯﾌﾟ¥spie¥US-file¥SPIE¥demo¥点検結果.htm
移動
インターネット
スタート
Eudora - [受信]
C:¥WINDOWS¥ﾃﾞｽｸﾄｯﾌﾟ...
点検結果 - Microsoft I...
Microsoft PowerPoint ...
点検結果 - Micros...
20:21

J-was ウェブアクセシビリティシステム

点検結果

[目次に戻る] [HTMLの点検と修正に戻る] [詳細説明一覧]

1. 点検結果のレベル

対象URL(http://www.jwas.gr.jp/test/)に対して、点検レベル「B」で点検を行いました。
◆最初の点検の結果：満たしているレベルはありません
◆確認画面で回答いただいた後の結果：満たしているレベルはありません
あと10箇所の問題点を改善するとレベル「B」を満たすことになります。

2. 優先度ごとに見た問題点

ガイドラインで定義してある4つの優先度ごとの問題点を、一覧で示します。
各項目の最後に( )で表示されて番号は、点検項目を識別する番号です。

優先度1＋(最低限クリアしたい項目)での問題点

画像の代わりとなるテキストが用意されていません。(1.1.1)
×+11行目, ×+12行目, ×+20行目, ×+26行目, ×+27行目, ×+29行目, ×+31行目, ×+32行目, ×+64行目, ×+73行目

この表はデータ用の表ですか？
レイアウト用の表ですか？(5.1.1)
?+15行目

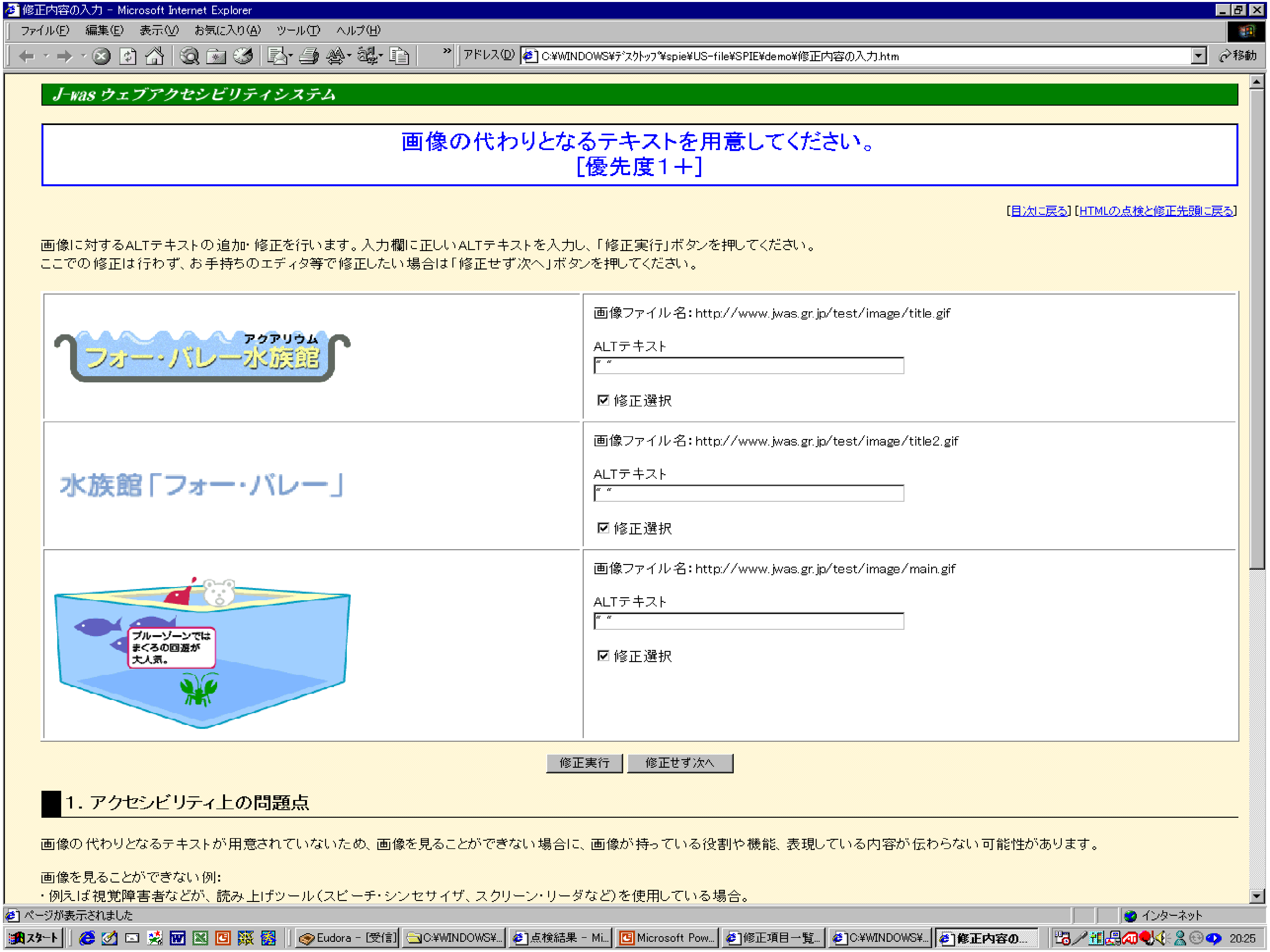
この表はデータ用の表ですか？
レイアウト用の表ですか？(5.1.1)
?+41行目

この表はデータ用の表ですか？
レイアウト用の表ですか？(5.1.1)
?+60行目

優先度1(クリアしたい項目)での問題点

優先度2(クリアが望まれる項目)での問題点

優先度3(クリアが望まれる項目)での問題点


修正内容の入力 - Microsoft Internet Explorer
ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)
アドレス(D) C:¥WINDOWS¥ﾃﾞｽｸﾄｯﾌﾟ¥spie¥US-file¥SPIE¥demo¥修正内容の入力.htm
移動
アクアリウム
フォー・バレー水族館
水族館「フォー・バレー」
ブルーゾーンでは
まぐろの回遊が
大人気。
ページが表示されました
インターネット
スタート
Eudora - [受信]
C:¥WINDOWS¥...
点検結果 - Mi...
Microsoft Pow...
修正項目一覧...
C:¥WINDOWS¥...
修正内容の...
20:25

J-was ウェブアクセシビリティシステム

画像の代わりとなるテキストを用意してください。
[優先度1＋]

[目次に戻る] [HTMLの点検と修正先頭に戻る]

画像に対するALTテキストの追加･修正を行います。入力欄に正しいALTテキストを入力し、「修正実行」ボタンを押してください。
ここでの修正は行わず、お手持ちのエディタ等で修正したい場合は「修正せず次へ」ボタンを押してください。

画像ファイル名：http://www.jwas.gr.jp/test/image/title.gif

ALTテキスト
" "

☑ 修正選択

画像ファイル名：http://www.jwas.gr.jp/test/image/title2.gif

ALTテキスト
" "

☑ 修正選択

画像ファイル名：http://www.jwas.gr.jp/test/image/main.gif

ALTテキスト
" "

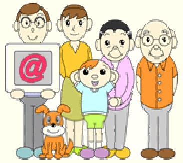
☑ 修正選択

修正実行 修正せず次へ

1. アクセシビリティ上の問題点

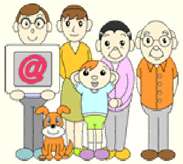
画像の代わりとなるテキストが用意されていないため、画像を見ることができない場合に、画像が持っている役割や機能、表現している内容が伝わらない可能性があります。

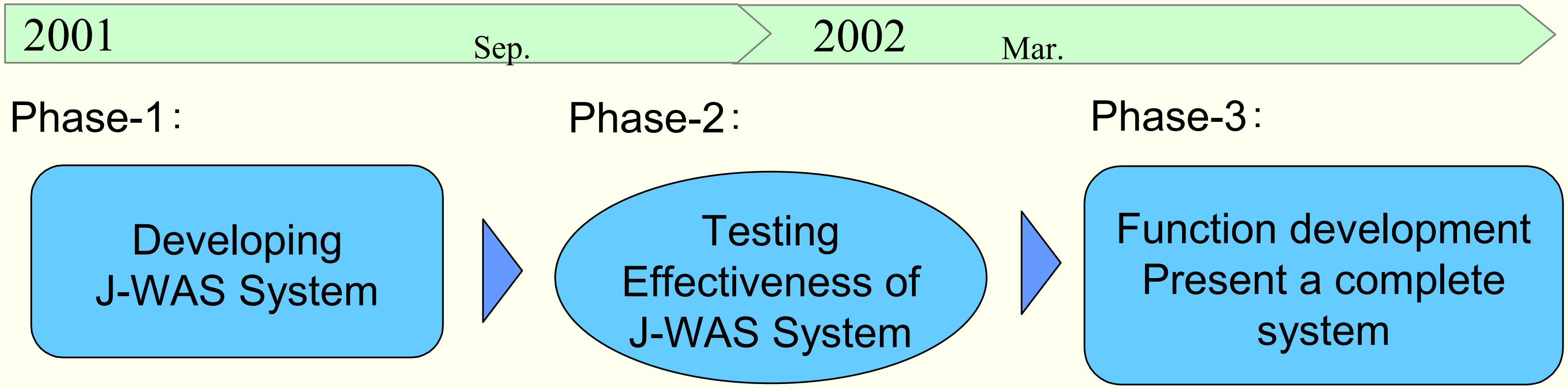
画像を見ることができない例:
･例えば視覚障害者などが、読み上げツール(スピーチ･シンセサイザ、スクリーン･リーダなど)を使用している場合。



3. Plan for J-WAS Project from now

J-WAS Project schedule in timeline





2001 Sep. 2002 Mar.

Phase-1：

Developing J-WAS System

Development of system which is adopted to Japanese accessibility difficulties

Phase-2：

Testing Effectiveness of J-WAS System

Actual testing in usage by Web Authors

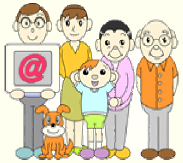
【Currently on going】

Phase-3：

Function development Present a complete system

Develop developable aspects that are found in actual testing in usage by Web authors

Crucial points from this presentation



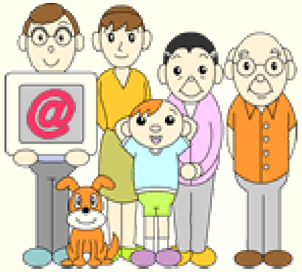
- The purpose of this presentation is to report on development of web accessibility evaluation and repairing system to solve unique difficulties in Japan

In order to spread the concept of web accessibility…

- Web is a media consisting of letters. Therefore, it needs to be localized according to language characteristics

- Internet using environment for people with disabilities varies greatly in each country. It is important to take local situation into account

Internet Imaging III



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